



Social Sciences Spectrum

A Double-Blind, Peer-Reviewed, HEC recognized [Y-category](#) Research Journal

E-ISSN: [3006-0427](#) P-ISSN: [3006-0419](#)

Volume 04, Issue 02, 2025

Web link: <https://sss.org.pk/index.php/sss>



Check for updates

Bridging Gaps in Pakistan's Energy Security: The Strategic Role of Economic Cooperation Organization (ECO)

Maryam Bibi

M. Phil Scholar, Department of Politics and International Relations, Government College Women University Sialkot, Punjab, Pakistan

Correspondence: maryam.bibi@gmail.com

Dr. Zahid Yaseen

Associate Professor, Department of Politics and International Relations, Government College Women University Sialkot, Punjab, Pakistan

Email: zahid.yaseen@gcwus.edu.pk

Dr. Ghulam Qasim

Assistant Professor Faculty of Social Sciences, Khwaja Fareed University of Engineering & Information Technology, Rahim Yar Khan, Punjab, Pakistan

Article Information [YY-MM-DD]

Received 2025-03-09

Accepted 2025-05-11

Citation (APA):

Bibi, M., Yaseen, Z & Qasim, G. (2025). Bridging gaps in Pakistan's energy security: The strategic role of Economic Cooperation Organization (ECO). *Social Sciences Spectrum*, 4(2), 364-375. <https://doi.org/10.71085/sss.04.02.276>

Abstract

This paper looks at the key weaknesses in Pakistan's energy security and checks out how the ECO can help tackle these issues. It talks about the ongoing power shortages in Pakistan, the inefficient infrastructure, poorly made policies, and the absence of a solid strategic plan, using a qualitative approach. By examining energy trade, infrastructure links, and renewable energy projects, the paper assesses ECO's role as a regional platform for energy cooperation. The review shows how ECO's cooperation models could help Pakistan create a more secure and varied energy setup. It relies on policy papers and other data. The findings suggest that while ECO has great potential, there needs to be political motivation, stronger institutions, and more regional collaboration for it to be truly effective. Working closely with ECO could help Pakistan overcome its energy shortages and achieve lasting energy security. The analysis of policy guidelines, ECO agreements, and regional energy projects points out ways for improving infrastructure and trade, but these are often hindered by regional rivalry, inconsistent policies, and inadequate infrastructure.

Keywords: Energy Security, Geopolitics, ECO, Cooperation, Pakistan, Regional Cooperation, Trade Interdependence, Energy Sector.



Content from this work may be used under the terms of the [Creative Commons Attribution-Share-Alike 4.0 International License](#) that allows others to share the work with an acknowledgment of the work's authorship and initial publication in this journal.

Introduction

ECO (Economic Cooperation Organization): Turkey, Iran and Pakistan established ECO in 1985 in the spirit of regional economic cooperation for a peaceful, prosperous and stable region through development and strengthening of economic and trade ties. It was further advanced with the collapse of Soviet Socialist Russia, that included Afghanistan. The northern (energy rich) tier of the ECO is also threatened by means of lack of infrastructure, technological backwardness, and financial constraints, which may lead to a situation where it becomes not only prone to, but also a victim of, the interests of strategists in the region and the world at large (Qureshi, 2023).

Energy Shortages, infrastructure and high demand put Pakistan at risk on the Card Nation. The Economic Cooperation Organization (ECO) seeks to enhance regional cooperation and solidarity in accordance with corresponding program goals and comparability of policies. USA sat down with containment policies from which Iran, China and Russia have been unable to carry out their major energy projects. Those countries and regional powers like Turkey, Afghanistan, Pakistan, and Iran are effectively thwarting U.S. interests in the region (Malik, et al 2019).

The formulation of energy security is being operationalized through directories, ECOTA agreement, and regional trading relationship by ECO. It is all about networking and energy resources securitization, with a focus on transportation systems, roads, rail lines, and sea ports. On the other hand, the bigger larger story is that by banding together countries like Pakistan and Turkey those that now rely on them for warfighting energy supplies (Warikoo, 2011).

This research work discusses the concept of energy security in order to understand the worth of oil and gas and different dimensions of it. The focus of this research work is on the energy security of Pakistan and the potential of ECO. The organization's structure and potential in providing energy security assistance to member states are explored. Challenges include internal disagreements among states and external factors like Russia, China, India, and the USA's divergent interests. The research also examines the objectives and policies of regional organizations in central Asia, focusing on energy security as the central focus.

Literature Review

Pakistan's strategic importance in South Asia, East Asia, and Central Asia, as a hub for the transportation and mobilization of hydrocarbon resources and commodities. Emphasizes the strategic importance of Gwadar port, its important road and rail connections, and the TAPI gas pipeline project. Pakistan's participation in regional organizations such as ECO, SAARC, and SCO will allow it to make important contributions to the energy transportation industry in the future (Anwar, 2011).

Energy and politics are interconnected, with states utilizing energy sources for economy and security. Energy security includes coal, oil, natural gas, and nuclear, and pipeline security and conflicts and also discussed the relationship between energy and politics, focusing on three pipeline projects: The Kazakhstan-China pipeline, the Baku- Tbilisi-Ceyhan pipeline, and the Chad-Cameroon Petroleum Pipeline Project. They assess the energy policies of countries such as China, Russia, Iran, and Saudi Arabia, examining natural resource potential and political tactics for national goals (Shaffer, 2011).

The energy projects that connect South and Central Asia, focusing on potential hydrocarbon resources in Central Asia and the Caspian region. It focusses on Russia, Kazakhstan, China, and India's energy policies, bilateral cooperation, Indo-China rivalry, and pipeline projects such as IPI and TAPI, with the New Great Game as the central theme. The second half of the book delves into

oil and gas transportation links, Gwadar's potential as a bridge, and Afghanistan's security, giving a comprehensive overview of energy security efforts (warikoo, 2011).

Focus Pakistan's energy security scenario, emphasizing its crucial significance in international relations by concentrating on important players, dynamics, and contributing factors. In the current political milieu energy security has become a pertinent concept. The growing reliance of the world economy on energy has brought attention to energy security concern, impacting state developments at all levels from national to regional. Policies and research on energy security are crucial and states pursue it in different ways. For instance, Pakistan has had difficulty building a stable energy base as a result of energy constraint. Pakistan faces challenges in creating a reliable energy supply, underscoring the need to investigate the past, settle geopolitical disputes in the region, assess the present situation, and plan for the future (Mukhtar, 2023).

The growth of energy security in international relations and global politics, highlighting the potential of Central Asia and analyzing the energy strategies of the US, Russia, China, and India in the region, assessing their approaches the development and emphasizing pipeline politics. It provides an in-depth analysis of the energy policies and foreign policies of central Asian states, providing valuable insights into the region's energy politics (Yıldırım, 2012).

Examines energy policy with the goal of maximizing the value of inputs used in energy production. In order to lessen reliance on fossil fuels, point out the necessity for a new paradigm in energy security that places more of an emphasis on resource efficiency and renewable energy generation than just supply security. (Mouraviev & Koulouri, 2018).

It assesses collaboration and integration arrangements in the Economic Cooperation Organization (ECO) area, focusing on socioeconomic successes that influence regional integration, which is a fundamental component of economic liberalization, privatization, and globalization. Economic partnership, whether worldwide, regional, or bilateral, is critical to socioeconomic growth. Regional organizations such as ASEAN and the EU promote global collaboration within these regions. The ECO, formed by the Izmir Treaty, aspires to promote regional collaboration and economic development among 10 member nations based on their geostrategic location and significant energy resources. In the future, ECO might act as an engine for global economic expansion (Ali & Khalid, 2015).

Pakistan imports approximately one-third of its energy resources, including coal, oil, and liquefied natural gas (LNG). This study uses (4As) framework to analyze Pakistan's energy security from 2011 to 2017. It draws attention to the unsustainable import-driven strategy that depletes foreign exchange reserves, leaves the country vulnerable to shocks to global energy prices, and lowers export competitiveness. Initially, Pakistan's energy security got better. but deteriorated over the next three years, despite significant infrastructure investments. The paper recommends rapid adoption of green energy solutions and increased conservation efforts (Malik, et.al. 2019).

This study finds out and examined the functions of ECO in boosting Pakistan's energy security through regional cooperation, this study seeks to close these disparities. Insufficient attention has been paid to the role of regional organizations, especially the Economic Cooperation Organization (ECO), in the literature that currently exists on Pakistan's energy security. Instead, the focus has mainly been on local issues such energy scarcity, ineffective policies, and inadequate infrastructure. There isn't enough thorough research on how ECO might affect Pakistan's energy security, despite the fact that it offers chances for regional energy cooperation through shared infrastructure, cooperative investments, and cross-border energy trading. Furthermore, there are few studies that look at the energy ambitions of ECO, the geopolitical landscape, and cooperation

in renewable energy within this regional context. By examining the function of ECO in boosting Pakistan's energy security through regional cooperation, this study seeks to close these disparities.

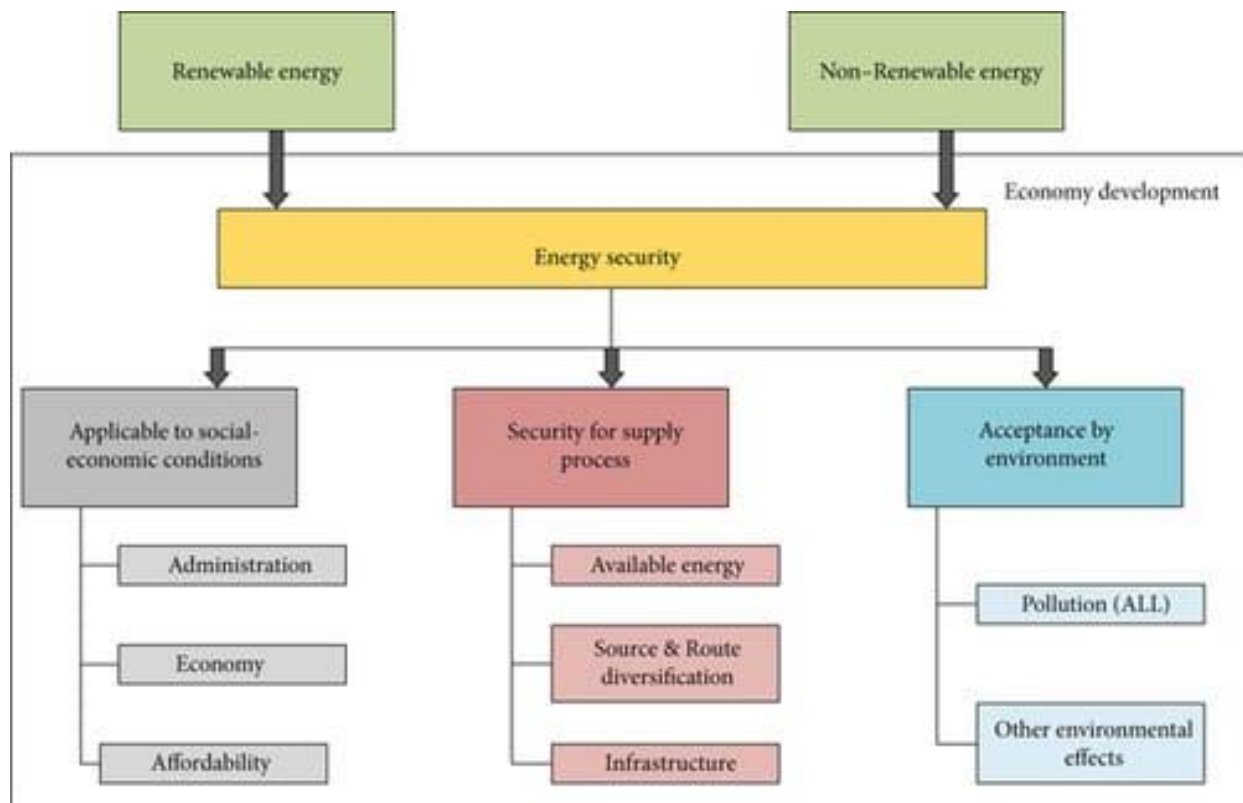


Figure 1.1: Analytical Structure between Energy and Security.

https://www.researchgate.net/figure/The-analytical-structure-used-to-study-the-relationships-between-energy-and-security_fig1_262922694

Material and Methods

This research encompassed with the descriptive and analytical approaches to examine Pakistan's energy security issues in the context of regional cooperation through the Economic Cooperation Organization (ECO). Examining how ECO can enhance Pakistan's energy security is the goal of the study and its main objective is to analyse the dynamics of regional cooperation within ECO and evaluate how they affect Pakistan's framework for energy security. Data collection was assimilated by primary and secondary sources like journals, books, reviews, newspapers, documents and documentaries, the ECO website, and all other available resources related to the proposed plan of research.

Results and Discussions

Understanding the Current Energy Landscape of Pakistan

Pakistan is dealing with a tricky energy crisis, and things are getting tougher because of political unrest and economic Stagnation. A major cause of the current crisis, the nation's power sector is beset by inefficiencies that have driven up electricity prices well beyond the means of many citizens. With economic imbalances growing as a result of a greater reliance on external debt, public protests over the skyrocketing electricity prices are a reflection of the unhappiness felt by the majority and also with the help of financial institutions, Pakistan should use the current crisis

to rebuild its energy sector and hasten the switch to clean energy. Pakistan is capable of producing close to 3,000 MW of energy from solar and wind by leveraging the human resources and expertise gained from developing renewable projects. Since politics has held the nation hostage, eroded investor confidence and lowering investment, energy security requires a consistent policy environment. (Salik, 2016). A substantial mismatch between supply and demand is the cause of Pakistan's poor state of energy security. Severe power outages occur because more than one-third of the population does not have access to the grid. 95% of Pakistanis live in fuel poverty, which has an adverse effect on their monthly spending plans and level of thermal comfort indoors. Pakistan should use coal and renewable resources, expand its water storage capacity, and take nuclear energy into consideration as a crucial component in order to lessen its dependency on gas and oil.

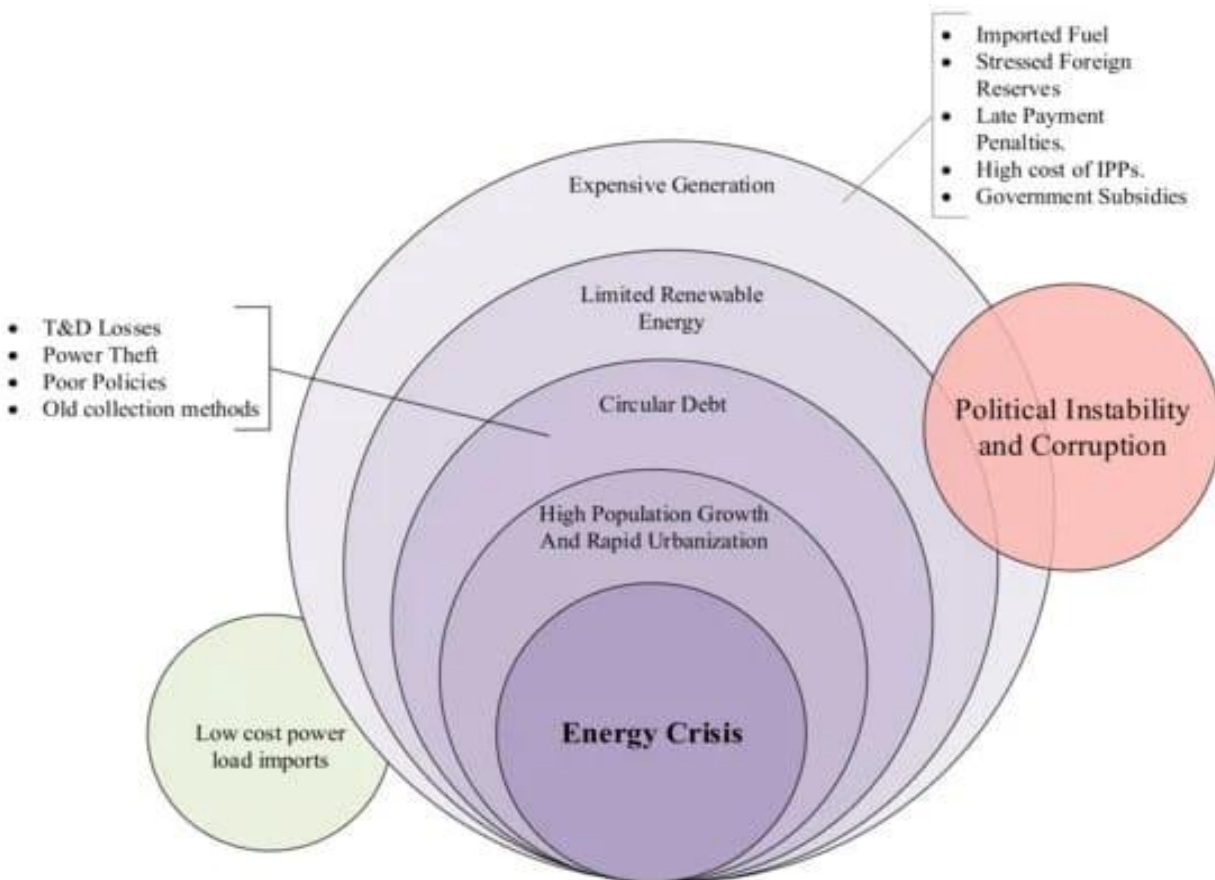


Figure 1.2: *Energy Crisis in Pakistan*

Source: <https://www.mdpi.com/1996-1073/16/1/423>

- **Several characteristics define Pakistan's energy landscape, such as:**

Sources of Energy: Natural gas and oil are the nation's main energy sources. The primary renewable energy source in Pakistan is hydropower, while thermal power, or fossil fuels, provides the majority of the country's electricity. Nuclear and renewable energy sources like wind, solar, and biomass are also part of the nation's energy mix (Mukhtar, 2023).

The energy crisis: For a number of years, Pakistan has been dealing with an energy crisis. One of the many causes of the crisis is the lack of investment in the energy sector (Mouraviev & Koulouri, 2018).

Sustainable energy: The nation's reliance on renewable energy is being increased by the government. By 2030, 20–30% of the nation's energy should come from renewable sources, according to a 25-year energy policy being developed by the Ministry of Energy (Jaiwa, et al., 2022).

Solarization of public structures: To help meet the demand for electricity and lower electricity costs, the government is installing solar photovoltaic systems on public buildings.

Less than half of Pakistan's population uses clean fuels, and only 77% of them have access to reliable electricity. Grid-based electricity supply is hampered by the economically trapped power sector, which results in load shedding and power fluctuations. Pakistan is working on initiatives like the Strategic Underground Gas Storages and Iran-Pakistan Gas Pipeline Project to increase energy security (Rizk, 2024).

Bridging Energy Gaps through Regional Cooperation

The basis of a nation's humanity is now energy. Humanity has achieved much by means of efficient energy production processes. Power is fitness for human needs of all kinds. People's basic needs are not being met when there is no affordable source of energy. Thus, the question of whether the energy supply is or is not adequate cannot be answered in purely objective terms, since energy must simply be available in sufficient quantities at low cost to satisfy human needs at a basic level (Saira & Javed, 2022). By promoting cooperation in energy projects, promoting trade in energy, harmonization of its policies to guarantee reliable access to different energy sources all over the region, an organization at regional level like the Economic Cooperation Organization (ECO) can use its different energy resources to form a strong and resistant energy market within the region. This is of particular impact on energy-starved countries like Pakistan, which can gain access to the resources of Central Asia through avenues such as the TAPI and CASA-1000 under the ECO banner. International organizations have made a major contribution to the challenge of energy security by cooperation, common infrastructure and policy frameworks. They support member states in their collective efforts and initiatives to tackle energy challenges, address the allocation of resources and promote sustainable energy solutions (Khan K. , 2012). The South Asian Association for Regional Cooperation (SAARC) and the Economic Cooperation Organization (ECO) and Shanghai Cooperation Organization (SCO) aid Pakistan's energy security by widening access to nearby border energy trade, cross-border energy trading, and cooperative regionally infrastructural initiatives like the TAPI gas pipeline. This helps to diversify the individual energy dependencies of Pakistan and strengthen its energy supply (Anwar, 2011).

The Role of the Economic Cooperation Organization (ECO) in energy security

The ECO is a regional forum that can help member nations work together to improve Pakistan's energy security:

Promoting Regional Cooperation

ECO can be extremely important in promoting regional energy security cooperation:

Joint Projects: ECO can support cooperative projects that aim to improve regional connectivity for energy supplies, as demonstrated by initiatives like the TAPI (Turkmenistan-Afghanistan-Pakistan-India) pipeline.

Information Sharing: ECO gives member states a forum to exchange knowledge about technological advancements, regulatory frameworks, and best practices in energy management.

Capacity Building: Member states can improve their technical proficiency in sustainable practices and renewable energy through ECO-organized workshops and training programs (Siraj, 2022).

Enhancing Economic Interdependence by fostering trade relationships within the region

Reducing Vulnerability: Increased energy resource trade among ECO members can lessen Pakistan's susceptibility to outside shocks brought on by changes in the world oil markets or geopolitical unrest with its suppliers

Creating Mutual Dependencies: Countries create mutual dependencies that encourage cooperation over conflict as they become more economically involved through shared projects like gas pipelines or electricity grids.

Institutional Framework for Conflict Resolution

- ECO helps member states work through disagreements about shared resources in a few ways:

Conflict Resolution: By setting clear rules for how to share resources, ECO can help prevent fights over limited supplies.

Regular Talks: Holding regular conversations can strengthen trust among members and create space to talk about tough issues like pricing and distribution (Rana, 2015).

Better Energy Cooperation with ECO Working Together

Collaborative Ventures: Member countries can team up to make the most of existing fossil fuels or develop new renewable energy options.

Sharing Energy: ECO countries could set up regional electricity markets to share resources during shortages or trade extra electricity when demand is high.

More Reliable Energy Supply: By making agreements to work together, energy resources could become more stable.

Partnering with Different Suppliers: Pakistan can keep its supply chain safe from disruptions caused by market ups and downs or global tensions by teaming up with various regional suppliers instead of just relying on imports from countries like Saudi Arabia or Iran.

Investing in Infrastructure: Working together through ECO can lead to investments in infrastructure that will make it more tough against natural disasters or tech issues that threaten supply stability.

Building Regional Connections: When countries depend more on each other, it can help promote stability in the region.

Opportunities for Economic Growth: As member countries collaborate on clean energy projects like wind and solar alongside fossil fuels, they can open up new pathways for cross-border economic growth.

Political Stability Through Economic Cooperation: More collaboration can lead to stronger economic relationships, which might reduce the chances for conflict over scarce resources and boost political stability in South Asia.

Opportunities for Pakistan in the ECO Region

- Availability of energy resources in Central Asia.
 - Regional trade expansion.
 - Transit and connectivity route development.
 - Taking part in infrastructure initiatives.
 - Drawing in FDI (foreign direct investment).
 - Reduction of energy shortages at home.
 - Economic diversification opportunities.
 - Strengthening of geopolitical power.
 - Deepening religious and cultural bonds.
 - Availability of landlocked markets in Central Asia.
 - Encourage and support CPEC initiatives.
 - Encouragement of travel and educational collaborations.
-

TAPI is a gas pipeline from Turkmenistan to South Asia.

Significance: 1. Diversifies Pakistan's gas supply 2. Enhances regional cooperation.

Challenges: Security concerns in Afghanistan delay Progress

ECO's Contribution to Pakistan's Energy Security

Pakistan's energy security might be greatly improved by the Economic Cooperation Organization (ECO) through policy coordination, infrastructure development, and regional cooperation and also (ECO) is essential to solving Pakistan's problems with energy security. In light of its strategic emphasis on regional cooperation, ECO has started initiatives to improve energy connectivity between its member nations, including Pakistan. Diversification of energy sources and supply stability are the goals of cooperative projects like the CASA-1000 project and talks on transnational gas pipelines like the TAPI pipeline. Pakistan's growing energy demands require investments in renewable energy and energy infrastructure development, both of which are facilitated by ECO's regional focus. (Qureshi, 2023).

ECO reduces geopolitical tensions that can interrupt energy supply as an additional service besides direct energy projects, thereby enhancing regional stability. Nevertheless, impediments such as financial limitations, existing geopolitical disputes, and slow project execution are preventing ECO from fulfilling its complete energy potential. In order for Pakistan to optimize ECO energy projects, it must approach these challenges with greater political will and more effective policies. Despite these issues, ECO continues to represent an important forum for enhancing Pakistan's energy security and promoting outcome-oriented regional cooperation.

CASA-1000 will deliver 1,300 MW of hydropower from Kyrgyzstan and Tajikistan to Pakistan.

Benefits for Pakistan: 1. Increase electricity supply 2. Strengthens ECO energy ties

Current Status: Under construction with world Bank support

The organized table below illustrates how Pakistan's energy security is supported by the Economic Cooperation Organisation (ECO):

Table No 1: *Illustrates how Pakistan's energy security is supported by the Economic Cooperation Organisation (ECO)*

Area of Support	Details	Impact on Pakistan
Regional Energy Projects	Energy pipelines and electrical interconnectivity are examples of regional projects that ECO coordinates.	Promote the availability of reliable and reasonably priced energy sources is the aim.
Facilitation of Investments	Encourages ECO members to form joint ventures in order to draw investments in energy projects.	Supports the growth of energy infrastructure and renewable energy initiatives.
Promotion of Renewable Energy	Advocates the use of renewable energy to diversify the energy mix.	Helps cut expenses and improve sustainability by reducing dependency on fossil fuels.
Trade Agreements for Energy	Encourages member states to enter into energy trade agreements in order to guarantee a steady supply.	Provides excess energy from nearby nations accessible.
Technical and Capacity Development Integration and Resource Sharing	Provides technical support and training courses for energy development.	Enhances Pakistan's technical capacity for effective energy sector management.
	Allows resources and Expertise, such as funding sources and technical know-how, to be shared.	Enhances regional energy cooperation by taking advantage of Pakistan's needs and potential.
Pay attention to energy security	prioritizes energy security in its roadmap for Vision 2025.	Coordinates regional initiatives to tackle Pakistan's energy security issues.

Pakistan's economic security could benefit from multiple facets of the Economic Cooperation Organization (ECO). By facilitating regional energy projects, infrastructure investments, and energy trade generally, ECO provides Pakistan with inexpensive and reliable sources of energy supply. Moreover, ECO is well-aligned with Pakistan's effort to expand its energy baskets and lower its dependency on gas and oil, through ECO's focus on developing renewable energy. Three, ECO's training initiatives also strengthen Pakistan's human capacity in energy management and associated fields. As a result, generally with ECO's strategic and cooperative support initiatives, Pakistan's energy issues seem to be at least addressed, thus supporting regional cooperation and sustainable development (Pomfret, 1997).

The ECO and Energy Security

Energy security is a big deal for the Economic Cooperation Organization (ECO). The ECO aims to get its member countries to work together in the energy sector, making sure everyone has

reliable and affordable energy. This is especially important given the region's mix of energy resources and the challenges posed by political tensions. The ECO focuses on two main areas: transportation and communication, and energy, minerals, and environment—both of which link directly to energy security since the region has plenty of oil and gas (Akram, 2008). Countries like China, Russia, the U.S., India, and regional players like Iran, Pakistan, and Turkey are all considering energy security in their foreign policies, especially in what's being called the New Great Game. At the heart of this competition is how these countries have connected through pipelines and roads. It's crucial for security teams to protect these routes because terrorists can easily disrupt the flow of oil and gas if they attack these supply lines (Anwar, 2011).

Current Situation of Energy Security in 21st Century

Energy security in the twenty-first century is a complex, fluid scenario subject to additional complications from environmental imperatives, more erased energy sources, volatile geopolitics, and techno-economic innovations. The world has, for instance, shifted to renewables such as solar, wind and hydropower followed by natural gas and a reduced role for nuclear energy, while fossil fuels are being phased out. Resource nationalism infects international relations even as geopolitical clashes, including Russia versus Ukraine, have interrupted supply chains. At the same time, the need for sustainable energy systems is being driven by global decarbonization initiatives and the effects of climate change, including extreme weather events. In order to balance supply and demand, technological advancements like carbon capture, smart grids, and energy storage are becoming essential (Milina, 2013). However, there are serious equity issues due to the growing demand for energy in developing nations and the ongoing lack of access to electricity in impoverished areas. To improve cross-border energy trade and stabilize markets, regional organizations and international collaboration are crucial. The future of energy security rests on finding a balance between sustainability, resilience, and accessibility while navigating the complexities of global politics and climate demands (Hofmeister, 2011).

Conclusion

The Economic Cooperation Organization (ECO) is key for Pakistan when it comes to boosting energy security by working together with other countries in the region. It can help Pakistan tackle its energy issues in a way that supports long-term sustainability through increased trade, energy partnerships, and building better infrastructure.

This paper looks at energy security today and stresses the importance of sustainable resources and teamwork between countries. It points out that the Economic Cooperation Organization (ECO) backs regional energy partnerships. While Pakistan has chances for strategic cooperation and policy changes, challenges arise from non-state actors, including militants and terrorists. For ECO to ensure energy security, it needs to work alongside foreign nations and neighbouring states. The Islamic regional group should focus more on energy security and also address conflicts in the region, seeking solutions through international law. It suggests a fresh perspective for how ECO should view global politics.

Recommendations

- Encourage the construction of international energy pipelines, such as CASA-1000 and TAPI, to guarantee consistent energy supplies.
- ECO should foster diplomatic engagement to ensure secure energy corridors, especially in Afghanistan and Iran.
- Through the ECO framework Pakistan should promote regional energy trade agreements and import gas and electricity from resource-rich ECO members like Kazakhstan, Iran and Turkmenistan.
- Get Pakistan to get its foot in the door as a transit route between Central and South Asia.
- Collaboration on ECO energy depends on increased political stability.
- As a safeguard measure, Pakistan must promote harmony and communication among its component countries.
- The ECO is a platform for tackling trade and geopolitical barriers to energy cooperation.
- Encourage all members of the ECO to take a cooperative approach in order to address global energy issues such as world warming and price volatility.
- Together with other ECO countries, build together on a common basis renewable energy projects including solar, wind and hydroelectric power.
- Build joint ventures in ECO member states to explore oil and gas to achieve energy self-sufficiency.
- Encourage the adoption of digital technologies, such as smart grids to reduce losses and to maximize the distribution of energy.
- Obtain financing for ecological energy projects from organizations associated with ECO.
- Promote collaborative responses to global energy problems developed by ECO's member states (e.g., price volatility, global warming).
- Regional cooperation to promote prioritization of demand-side management and energy-saving policies.

Conflict of Interest

The authors showed no conflict of interest.

Funding

The authors did not mention any funding for this research.

References

- Ali, M., & Khalid, N. M. (2015). An Analytical Study of Economic Cooperation Organization (ECO): Challenges and Perspectives. *European Academic Research*, 2, 14031-14045.
- Anwar, Z. (2011). Development of Infrastructural Linkages between Pakistan and Central Asia. *A Research journal South Asian Studies*, 26(1), 103-113.
- Hofmeister, J. (2011). Why We Hate the Oil Companies: Straight Talk from an Energy Insider. *Palgrave Macmillan Trade*.
- Mouraviev, N., & Koulouri, A. (2018). Energy Security Policy Challenges and Solutions for Resource Efficiency. *Germany: Springer International Publishing*.
- Milina, V. (2013). Energy security: A paradigm shift. *Connections*, 12(4), 75-98.
- Mukhtar, A. (2023). The Dilemma of Energy Security political and Institutional Hazards in Case of Pakistan (1947-2020). *Germany: Brill*.
- Malik, S., et al. (2019). Energy security in Pakistan: a quantitative approach to a Sustainable Energy Policy. ADBI Working Paper 1024. Tokyo: Asian Development Bank Institute.
- Pomfret, R. (1997). The Economic Cooperation Organization: Current Status and Future Prospects. *Europe-Asia Studies*, 49(4), 657-667.
<https://doi.org/10.1080/09668139708412465>
- Qureshi, A. R. (2023). Pakistan and economic Cooperation Organization (ECO), *Research Journal of Political Science*, IV 127-138.
- Rana, W. (2015). Theory of Complex Interdependence: A Comparative Analysis of Realist and Neoliberal Thoughts. *International Journal of Business and Social Science*, 6(2), 290-297.
- Salik, M. N. (2016). Post-2015 Sustainable Development Agenda. *Strategic Studies*, 36(3), 113-135.
- Siraj, D. & Dashti, D. (2022). Drawing parallels between energy security and regional integration: a case study of south asia. *Pakistan Journal of International Affairs*, 5(2), 905-918.
- Saira, D. B., & Javed, D. A. (2022). Turkmenistan Afghanistan Pakistan India Gas Pipeline and Foreign Policy of Pakistan. *Journal of Development and Social Sciences*, 3(4), 290-298.
[https://doi.org/10.47205/jdss.2022\(3-IV\)28](https://doi.org/10.47205/jdss.2022(3-IV)28)
- Shaffer, B. (2011). *Energy Politics*. united states, *University of Pennsylvania Press*.
- Warikoo, K. (2011). Central Asia and south Asia energy cooperation and transport linkages. *Pentagon Press*.
- Yergin, D. (2006). Ensuring Energy Security. *Foreign Affairs*, 85 (2), 69-82.
<https://doi.org/10.2307/20031912>
- Yıldırım, G. (2012). Energy security and Central Asian geopolitics. *Middle East Technical University*.